



# EU-TYPE EXAMINATION CERTIFICATE



- [1]
- [2] **Component intended for use on/in Equipment or Protective System  
Intended for use in Potentially Explosive Atmospheres  
Directive 2014/34/EU**
- [3] EU-Type Examination Certificate Number: **DEMKO 16 ATEX 1694U Rev. 2**
- [4] Component: **Flat Panel Touchscreen Monitors, Models DM515-XX-D1, DM519-XX-D1, DM521-XX-D1 and DM522-XX-D1**
- [5] Manufacturer: **Pepperl + Fuchs GmbH**
- [6] Address: **Lilienthalstrasse 200, 68307 Mannheim, Germany**
- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of the European Parliament and the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to design and construction of components intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. **4788266980 3.1**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2012+A11:2013**                      **EN 60079-11:2012**  
**EN 60079-15:2010**                              **EN 60079-31:2014**
- [10] The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- [11] This EU-Type Examination Certificate relates only to the design and construction of the specified component. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.
- [12] The marking of the component shall include the following:

 **II 2/3 G**      **Ex ib nA IIC Gb/Gc**  
 **II 2 D**      **Ex ib tb IIIC Db**

**Certification Manager**  
Jan-Erik Storgaard

This is to certify that the sample(s) of the Component described herein ("Certified Component") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the component sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured component. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all products to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2016-03-11

**Re-issued:** 2019-04-24



**Notified Body**

UL International Demko A/S, Ballerup 5A, 2750 Ballerup, Denmark  
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## Schedule EU-TYPE EXAMINATION CERTIFICATE No. DEMKO 16 ATEX 1694U Rev. 2

- [15] **Description of Component:**  
This certificate covers Models DM515-XX-D1, DM519-XX-D1, DM521-XX-D1 and DM522-XX-D1. These devices are monitors that are intended for installation into a panel or suitable enclosure. The only accessible portion of the computer to the end-user is the intrinsically safe touchscreen display.

Nomenclature:

DM5XX	-	HI	D1	SS	NT
I		II	III	IV	V

Part	Description	Designation	Designation Description
I	Series Designation: Monitor Type, Display Size:	DM515	15 in., XGA (1024 x 768 pixel)
		DM519	19 in., SXGA (1280 x 1024 pixel)
		DM521	21 in., Full HD (1920 x 1080 pixel)
		DM522	22 in., WSXGA (1680 x 1050 pixel)
II	Screen Type	HI	Intrinsically Safe Touchscreen, Hardened, Resistive, Antiglare Glass
		TI	Intrinsically Safe Touchscreen, Antiglare Glass
III	Location for use	D1	ATEX/IECEx
IV	Housing Version	SS	Stainless Steel
		N0	No Option
		RM	Rack Mount
		SL	Stainless no logo
		NL	Standard no logo
		XX	2-digit alphanumerical code reflecting an option non-safety related.
V	Options	NT	NTSC Input
		PT	Special Drop-In replacement
		N0	No Option
		HB	High Brite
		NH	NTSC Input, LED Backlight, High Brightness
		PH	Special Drop-in replacement
		XX	2-digit alphanumerical code reflecting an option non-safety related.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is not covered in this certificate.

**Electrical data:**

Model Series	Voltage Rating	Current Rating
DM515	12V dc	2.5 A
DM519		3.8 A
DM521		4.1 A
DM522		4.4 A

**Routine tests:**  
None

- [16] **Descriptive Documents**  
The scheduled documents are listed in the report no. provided under item no. [ 8 ] on page 1 of this EU-Type Examination Certificate.

- [17] **Schedule of limitations:**
- The intrinsic safety barrier, gaskets and touch-screens are suitable for a service temperature range of -20°C to 50°C.
  - When mounted in a method that reduces the environment of the backside of the component to EPL Gc or non-hazardous, the exposed display/touch-screen is suitable for EPL Gb and/or Db.
  - The area of use excluding the display/touch-screen shall not be more than a pollution degree 2 as defined in EN 60664-1

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## Schedule

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# EU-TYPE EXAMINATION CERTIFICATE No. DEMKO 16 ATEX 1694U Rev. 2

- Provision shall be made external to the component to provide transient protection at a level not exceeding 119V at the power supply terminals.
- The input terminals are suitable for field wiring. See manual for installation details.
- The standard 5-wire resistive touch-screen (TI option) has not been evaluated for potential damage from UV exposure. Therefore, installation is restricted against direct exposure to sunlight is required. Regular inspections are necessary to check for deterioration of the touchscreen.
- Brightness Control Buttons - located on the back of the unit, were not evaluated as 'ib' circuits.
- The component is equipped with a separate ground terminal for the intrinsic safety barrier. Proper handling of this ground connection is required.
- The standard resistive touch-screen (TI option) does not pose a static hazard from normal use when the component is properly installed. Keep away from high charge processes.
- The hardened resistive touch-screen (HI option) has an outer layer of glass and no special consideration for static is required.
- The device has been evaluated for a maximum temperature class of T4 in a service temperature range of -20°C to +50°C. The relaxation for small component temperatures for a temperature class of T4 has been utilized.

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### Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

### Additional information

The Models DM515-XX-D1, DM519- XX-D1, DM521- XX-D1 and DM522- XX-D1 have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26